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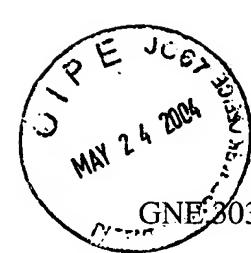
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GNE 3030R1C8

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Desnoyers, et al.
Appl. No. : 10/036,041
Filed : December 26, 2001
For : NOVEL NUCLEIC ACIDS
ENCODING PEPTIDES THAT
INDUCE CHONDROCYTE
REDIFFERENTIATION
Examiner : Jiang, Dong
Group Art Unit : 1646

**DECLARATION OF LUC DESNOYERS AND WILLIAM I. WOOD
UNDER 37 CFR §1.131**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

We, Luc Desnoyers and William I. Wood, declare and state as follows:

1. We are the inventors of the subject matter that is presently claimed in the above-captioned patent application.
2. During the time period in which all of the events and activities described herein occurred, we were employed by Genentech, Inc., the assignee of the above-captioned application.
3. All of the events and activities described herein were performed by us personally, or under our direction, as part of our duties as employees of Genentech, Inc.
4. The invention claimed in the above-captioned patent application was conceived prior to April 20, 1999 and diligently reduced to practice thereafter in the U.S. as described below.
5. Prior to April 20, 1999, we conceived of the nucleic acid sequences claimed in the above-captioned patent application. This is demonstrated by the attached sequence printout (Exhibit A), which was generated prior to April 20, 1999, and which shows the complete sequence of the nucleic acid having the sequence of SEQ ID NO:1. The attached printout also shows the complete sequence of the polypeptide which has the sequence of SEQ ID NO:2. As evidenced by the sequence printout, we were in possession of the complete nucleic acid sequence prior to April 20, 1999.
6. The date deleted from page 1 of Exhibit A is a date prior to April 20, 1999, and was redacted pursuant to M.P.E.P. § 715.07. The redacted date is the date when the data were generated; the date the report was printed, April 16, 2004, remains on the report.

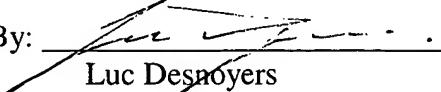
Appl. No. : 10/036,041
Filed : December 26, 2001

7. After initially conceiving the nucleic acid having the sequence of SEQ ID NO:1 prior to April 20, 1999, we diligently reduced the claimed subject matter to practice by working to express and purify the encoded polypeptide and to run it systematically through many assays. The cDNA was deposited with the American Type Culture Collection (ATCC) on January 12, 1999 and assigned ATCC no. 203581. The protein of interest was assigned a "protein inventory number" (e.g., PIN1308 and PIN1308-1). As set forth in the enclosed Exhibit B, the polypeptide was expressed in *E. coli* - PUR1009 (see page 2) on November 16, 1998; in *Baculovirus* - PUR1039 (see page 3) on November 23, 1998; and in mammalian cells (see page 4) on February 17, 1999. Furthermore, various constructs with poly-His or IgG tags were made from the time of first cloning and construction of these was followed by expression and purification of the encoded protein during the time period of prior to April 20, 1999 through March 13, 2003. For example, Exhibit C shows July 13, 1999 as the date of purification of a polypeptide having the sequence of SEQ ID NO:2. PIN1308 and/or PIN1308-1 were distributed to various scientists for multiple cell-based assays and/or quality confirmation tests from August 20, 1999 through January 22, 2001.

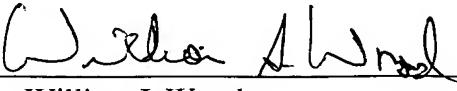
8. Exhibits D and E list the assays performed on the purified protein. Assay ASY110, called "Chondrocyte Re-differentiation Assay" was completed on November 10, 1999 for PIN1308-1, which is a polypeptide encoded by a nucleic acid having the sequence of SEQ ID NO:1. PIN1308-1 was delivered to Luc Desnoyers for one of the assay runs on October 22, 1999; testing was completed on November 10, 1999. Exhibit E is an assay result list that shows positive results for the assay completed on November 10, 1999, thereby confirming the ability of the encoded polypeptide to induce chondrocyte redifferentiation. Thus, actual reduction to practice occurred at least by November 10, 1999.

9. After reducing the invention to practice, we worked with the Genentech, Inc. patent department to prepare a non-provisional patent application, which included the sequence of SEQ ID NO:2, as well as the data showing the ability to induce chondrocyte redifferentiation. That application was filed on March 1, 2000.

10. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: 
Luc Desnoyers

Date: 05/17/2004

By: 
William I. Wood

Date: 5/17/04

Appl. No. : **10/036,041**
Filed : **December 26, 2001**

EXHIBIT A

(16 pages; pages 4-19)

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT A—PAGE 1

>Friday, April 16, 2004
>DNA4686 [Full]
>564 Sites [All_Sites]
> [DNA4686., shieldens]
>Sequence confirmed by phrag.

insert starts here

GSeqEdit, DNA44686 [Full], page 1

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT A—PAGE 2

ssrI
sacI
hgtAI/asphI [M.aluI-]
ecI136I-
bsp1286 [K.aluI-]
bsiBKA1
bmy-
banII [M.aluI-]
scrFI [dcm-]
pSPGI
mva: aluI
ecoriI [dcm-]
dsavI [dcm-]
bstXI
bsSI [dcm-]
mvaI
mvaI bpaI/gauI [dcm-]
bstXI apyI [dcm-]
101 AGACACGCT CCTGAGGCT CCTGAGCTC TCGGGGAC TCTGAGCTC AGTGGAGAT CATGGAAAT AGACACTTA GTCGAAACCT AGATAACCGT TGACGRCGGA
TCTGCTCGGA GGACCTCGAG AGCACAGAG AGGCCCTGT AGACTCCEAG AGAACCTTA GTCGAAACCT AGATAACCGT TGACGRCGGA
N L W R Q L I Y N Q E L A
_MET

pleI
mlyI
hinFI bsaI
hpyI E8 I II
14 L F L P F C L C Q D E Y N E S P Q T G G L P P D C S K C C H G D Y

mnII
mspI
hpaII
bsaWI
pstI
sfcI
pstI
mnII sfc
bsaWI
hpyCB4V

20: TGTGTTCC TCCCTTTCG CCTTGCTCA GATGATACA TGGAGTCCTC ACATAACGGA GAACTACCCC CAGACIGGAG TAAAGTGTGT CATTGGAGCT AACAAAGG AGGAAAGG GGACACAGT CTACTATG ACCTCAGGG TGTGIGCCCT CCTGATGGGG GTCGACCTC ATTCAACAA GAACTCTGA

GSeqEdit, DNA44686 [Full], page 2

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT A—PAGE 3

muol
bgI [M.haeIII-]
sau96I [N.haeIII-]
sau96I [M.haeIII-]
PspOMI / bsp120I
nla.V scrFI [dcm-]
sau96I [dcm-] [M.haeIII-]
scrFI [dcm-] eco0109I / drahI scrFI [dcm-]
PspGI scrFI [M.hpaII-] PspGI
nraI nciI PspGI nraI
ecoriI [dcm-] haeIII / paliI
dsav [dcm-] bsp128S / M.haeIII-]
xcmI
bstNI nspI nraI dsav [dcm-]
bsakiI [dcm-] bsaI ecoRII [dcm-] styI
bsaJI hpaII dsav [dcm-] ncoI
sau96I [M.haeIII-] banII [M.haeIII-] bstNI dsal
xcmI nraIV apyI [dcm-] apaI bstNI bssKI [dcm-]
styI haeIII / paliI dsav bssKI [dcm-]
bstNI bsaJI haeIII / paliI apyI [dcm-]
muol mnII bsaJI apyI [dcm-]
aiui tagI muol eco0109I / drahI bssKI mnII apyI [dcm-]
301 ACAGCTTCG AGCCACCAA GGCCCCCTG GGCAACCGGG CCCTCTGGC ATTCAGGAA ACCATGGAA CATGGCAAC ATGGGGCA CTGGTCTGGA
TGCGAAAGC CCCAATGGT CGGGGGGAC CGGGTGGCC GGGAGGACCG TGGGGCTT GTTACCGTTT GACCGGGT GACCGTACT
48 S F R C Y Q G P P G P P G I P G N H G N N G N K G A T G H E

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT A—PAGE 4

GSeqEdit, DRK44686 [Full], page 4

Appl. No. : **10/036,041**
Filed : **December 26, 2001**

EXHIBIT A—PAGE 5

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT A—PAGE 6

nlairI
styI
rcol sau96I
dsal nlairI
tseI hinPI btgI/bstDSI
fokI fnt4H/bsoFI hhaI/cf0I
bstF5I bbvI hsrDI haeII bsaJI avail.
801 AAAGGGGTTG AGGTTCGGC GCGAATGGC ATGGCGTC TOCATGGGA CCACCAACGC TTCTCCACTT TTGGAGGATC CTGGCTCTT GAAGCTAGT
TTCCCTTAC TCCAAACCGA CGGTACCCG TTACCGGAG AGGTACCCCT GTGTTGCG AGGGTGGAG AACGTTGAG AACGTTGAG AACGTTGAG AACGTTGAG
214 K G D E V N L R M G N G A L H G D H Q R F S T F A G F L L F E T K O
mmI
ddI
bspCNV
ddel[Mr.aluI-]
saI3AI
mbol/ndeII[dam-]
bpcCNV
cslI/espI
bpuAI bpuI/bpuI:021
dpnI[dam-]
dpnI[dam+]
tru9I
hsy188I
mseI
mnlI
bsrD:
901 AAAATATGCA TAGATAGC TCACTTGG GGAGACTTG TAGTGTAGCT GATTGTTAC GATCTGAGGA ACATTAAGT TGAGGTTTT ACATTTGCTT
TITATATACT GATCTATCG AGGTGAAACC CCTCTGAC ATCGACTCGA CTAAACATG CTAGACTCTG TGTAATTCA ACTCCCCAAA TGTAACG&C
ddel
bsp1286 t6I
bmyI hpy108I
banII mbolI
bsrDI
rsal
sfcI csp6I
ts5509: hpyCH4V
1301 ATCCAAATA TTATGGTTG CAATGTTGCT CAGCTTACAG GTACCCAAAT AGGTGGRC ATTCAGGGG CTCAGAAGRA TCACCAACAA ATATCTTC
TAGGTGCTT ATTAACCAAC GTTACACAA GTGGGTGTC CAUTGGGTA TTACACCTG TTAGTCCTG GAGTCTCCC AGTGGCTCTT AGTGGGTGTT TAACTGAG
GSeqEdit, DNA44686 [Full], page 6

Appl. No. : **10/036,041**
Filed : **December 26, 2001**

EXHIBIT A—PAGE 7

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT A—PAGE 8

GSeqBedit, DNA44686 [Full], page 8

Appl. No.
Filed

: 10/036,041
: December 26, 2001

EXHIBIT A—PAGE 9

scrfI [dcm-]
PspGI
mvaI
ecoriI [dcm-]
dsAV [dcm-]
bstK1
bssK1 [dcm-]
epvI [dcm+]
bst4CI/hpYCH4III
1701 GAAAGAATT GACCTGGCT TAGATAAAC TGTGCGAGA AAGATGAT GACCAATA TGGAAATAA CACACCTTG TTAAGATAA, AAAAAAAA
CTCTCTAAA CTGGCCGA ACCTATTG ACACCGTCTT TTCTACATAC CTCGTATAT ACCTTATT GTGNGAAC ATTTCCTTCTT TTTCCTTCTT
trgI
mseI
bssK1 [dcm-]
thaI maeI
fnuDI/ryvI
aclI xbaI
fnc4HI/bsorF-
haeII/palI
mcrl Pie: tagI sscI
eagI/xmaII/eclXI salI pstI
eaeI mlyI hinCII/hindII [M.tagI-]
cfrI hinZI pIeI econI
bsEI drdI mlyI bsII
notI bsU: hpy-88III bspMI
fntAII/bsoF- bfaI accl [M.tagI-]
aclI ish1236I hin5: [M.tagI-] sceI
-801 AAAAAGAAA AAGGGCAGCC CGGACTCTAG AGCGACCTG CAACTGGAT AACGGGTA TAAGCTGGC CGCCATGGCC CAACTGTT ATGGCAGCTI
T-TTTT-TTTT TCCCGCGG CGCTGAGATC TCAGCTGGAC CTCACTCCCTA TTGTCCTTATTGAGACCG GCGGTACGG GTGAGACAA TAACGTCGAA
1901 ATATAG
CTATAC

styI
mveI ncoI [M.haeIII-]
fnc4HI/bsoF-
bglI [M.haeIII-]
sflI dsal
eaeI atgI/bstSII
cfri bsal
fnuDI/palI
bbvI psI
hpYCH4V

sau96I [M.haeIII-]
haeII/palI

GSeqEdit, DNA44686 [Full], Page 9

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT A—PAGE 10

> length: 1906

accI (GTMKAC) : 1832
actI (CCGCC) : 452 1815 1819 1870
aELIII (ACRGT) : 77
ahIII (TTTAAA) : 1464
aluI (AGCT) : 116 275 303 741 793 918 942 947 1356 1393 1483 1863 1896
a⁻W1 (GCAATCNNN) : 46 47 58 1419
apaiI (GGGCC) : 338 628
apoI (RAATTY) : 27 1221 1444
apyI (CCGGG) : 111 327 345 354 434 1713
aseI (ATTAAT) : 1683
asnI (ATTAAT) : 1683
aspEII (GGGWC) : 115
avuI (CYCGRE) : 94 442 488
avaII (GWC) : 848
banHI (GGATCC) : 46
barI (CGYRECC) : 1149
banII (GRGECY) : 115 338 628 1068
bbsI (GAAAGCNNTTAN) : 125 726 932 1095
bbvI (GCAGC) : 173 458 818 1357 14594
b⁻aiI (CTAG) : 53 795 911 1354 18227
bgiI (GCCNNNNNGC) : 34 340 1069
blpI (GCTNAGC) : 943 1394
bmyI (GAGCHC) : 215 338 628 1368 1349 1376
bpmI (CTGAG) : 112
bpvI 1G2I (GCTNAGC) : 943 1394
bpvI (GAAGACNNNN) : 125 726 932 1095

GSeqedit, DNA44686 [Full], page 10

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT A—PAGE 11

bsaI (GGCTCTCHNNNN) :	10C 582
bsaJ- (CCNNNN) :	9 95 317 326 327 362 434 488 489 842 145 1873
bsaM (ACCGCM) :	255
bsaR1 (GAGAGNNNNNNNN) :	97 1167
bsgI (GTGCAAG) :	4
bsI12361 (CGGG) :	78 1820
bsI1C1 (TTCGAA) :	24
bsI1F1 (GRCGCG) :	1816
bsI1H1A1 (GNGGWC) :	115
bsI1 (CCNNNNNNNN) :	249 633 922 1544 1837
bsM1- (GTCCTC) :	10C 136 245 295 582
bsM1A1 (GTCCTC) :	100 136 245 295 582
bsM6F1 (GGAAACNNNNNNNNNN) :	847
bsM- (GATGCA) :	349 516
bsO1F1 (GCNGC) :	173 458 818 1357 1815 1818 1669 1894
bsP106 (ATCGAT) :	19
bsP1201 (GGCCCC) :	338 628
bsP1286 (GCGCHC) :	115 338 628 1068 1349 1376
bsP1407I (TGATACA) :	736
bsP1C- (CTCAACNNNNNN) :	130 142 944 964 1071 1100 1123
bsP2I (ATCGAT) :	19
bsP3H1 (TCATGCA) :	395 610
bsP4C- (ACCTGC) :	1177 1836
bsrB1 (GAGGG) :	450
bsrD1 (GCAATGNN) :	829 992 1020
bsrG1 (TGACCA) :	736
bsrI (ACSGN) :	39 390 615 633 1252 1500
bsK- (CCNGG) :	83 111 327 336 345 354 434 488 489 1713
bstI1C1 (ACNGT) :	556 723 1615 1729
bstAPI (CCANNNNNGC) :	1351

GSeqEdit, DNA44686 [Full], page 11

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT A—PAGE 12

bsBEI (TTTCGAA) : 24
bsLDI (CCRYGG) : 362 842 1873
bs-ELI (GGATTC) : 429
bs-251 (GGATG) : 660 769 806 1313 1553
bsNTI (CCUGGG) : 111 327 345 354 434 1713
bsTUI (GGCG) : 78 1820
bs-XI (CCANNNNTGG) : 104 1500
bs-YI (RGATC) : 46 57
bsYI (CCRYGG) : 362 842 1873
bsI (GGATGRRN) : 574
cacBT (GCNNNC) : 194 794
celII (GCTTAC) : 943 1394
cfoI (GGCC) : 835
cfrI (GGCCR) : 32 41 1816 1867
clAI (ATCGAT) : 19
csp6I (GTAC) : 701 737 1041 1613
cdeI (CTTAC) : 130 142 895 944 964 1071 1100 1123 1395 1695
dpnI (GATC) : 47 58 961 1419
dpnII (GATC) : 47 58 961 1419
dralI (TTAAA) : 1464
dralI (RGENCCY) : 320 338 437 627 628
drclI (GACNNNNNGTC) : 72 1823
dsalI (CCRYGG) : 362 842 1873
dsav (CCCTG) : 83 111 327 336 345 354 434 488 489 1713
eaelI (YGTCCR) : 32 41 816 1867
eagI (GGCCG) : 1816
ec1136II (GAGCTC) : 115
ec-X2 (CGGCCG) : 1816
eco57I (CTGAAAC) : 507 542 569 659 728 789 1269 1667
ecNTI (CCTRNNNNAGG) : 1837

GSeqEdit, DNA46686 [Full], page 12

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT C—PAGE 13

ec001031 (RGCNCCY) : 320 338 437 627 628
ec0R1 (GAATTC) : 27 1444
ec0R1 (CCMCG) : 111 327 345 354 434 1713
esp- (GGTNAAC) : 943 1394
fnu4H1 (GCAGC) : 173 458 818 1357 1815 1818 1869 1894
fnu2H1 (CGGG) : 78 1820
fxi (CGATG) : 680 769 806 1313 1553
gsv1 (CTGGGAG) : 112
kael1 (RGCCCY) : 834
kell1 (GGCC) : 35 42 321 331 339 439 465 629 1817 1868 1877
kge1 (GACGC) : 79 1174
kgiAI (GNGCWC) : 115
khai (GCSC) : 835
klinP1 (GCSC) : 835
hinc1I (GTYRAC) : 1645 1832
hind-1 (GTYRAC) : 1645 1832
hird1I (MAGCTT) : 1862
hif1 (GANFC) : 22 138 157 243 494 877 1078 1308 1823 1830
hpaII (CCGG) : 44 83 256 336 489
hpII (GTCGA) : 411 429 655
hpy188I (TCNGA) : 141 509 551 762 963 1072 1101 1171 1311 1441 1551 1666
hpy188II (TCNGA) : 52 227 395 6.0 1259 1563 1826
hpyCH4II (ACNGT) : 555 723 1615 1729
hpyCH4V (CAGCA) : 5 276 515 709 872 1019 1215 1640 1839 1893
mae : (CTAG) : 53 795 911 1354 1827
mael1I (GNNAC) : 430 956
mboI (GAATC) : 47 58 961 1419
mboI : (GAGA) : 126 568 652 727 932 1075 1096 1669
ncrf1 (GRCGCC) : 18.6
nruI (ACCGGT) : 77

GSeqEdit, DNA4686 [Full], page 13

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT C—PAGE 14

mbi^Y (GGTCNNNN) : 138 243 1823 1830
xbaII (CCTC) : 9 50 62 68 97 144 176 209 259 310 342 441 445 670 687 810 966 982
xbaII (CTTA) : 2169 1382 1567 1573 1610 1653
xbaII (GAYNNNNRTG) : 974 1241 1246 1277 1434 1465 1584 1684 1781
675
mspI (CCGG) : 44 83 256 336 489
mvaI (CCGG) : 111 327 345 354 434 1713
smaII (GCRNNNNNC) : 78 1820
rcmI (CCGG) : 34 198 164 304 313 340 452 516 525 733 1351 1360 1869
rcmI (CCATGG) : 83 336 488 489
rcmI (CCATGG) : 362 842 1873
rcmI (GATC) : 47 58 961 1419
rcmI (GCTAGC) : 794
rcmI (CATG) : 161 239 291 363 396 462 521 611 665 675 734 780 843 1642 1674
rcmI (GGNNC) : 46 321 338 384 402 437 465 627 628 629 847 1149 1262
rcmI (GGGCC) : 18:5
rcmI (RCATGY) : 733 1641
rcmI (RCATGY) : 733 1641
paerII (CCGAG) : 442
paII (GGCC) : 33 42 321 331 339 439 465 629 1817 1868 1877
palI (GAGTCNNN) : 138 243 1823 1830
psiI (CTTAA) : 1293 1899
pspAI (CCGGG) : 468
PepGI (CCGG) : 111 327 345 354 434 1713
pspOMI (GGGCC) : 338 628
pspII (CTSCAG) : 275 1838
rcalI (TCAG) : 395 610
rmaI (CTAG) : 53 795 911 1354 1627
rsalI (GTAC) : 70 737 1613
EacI (GAGCTC) : 115

GSeqEdit, DNA46686 [Full], page 14

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT C—PAGE 15

sa1I (GCGC_n) : 1832
sau3AI (GATC) : 47 58 961 1419
sau36I (GCNC) : 321 330 338 339 438 465 628 629 848 1877
sceI (TAGGGTAAACAGGTAAAT) : 1844
serFI (CCNGG) : 83 111 327 336 345 354 434 488 489 1713
sfanI (GCA_nC) : 87 1127
sfclI (CTRYAG) : 275 299 1035 1838
sfII (GCCNNNNNGGCC) : 33 1868
sfui (TTCGA) : 24
smal (CCCGGG) : 488
sm1I (CTYRAG) : 442
sspI (AATATT) : 1187
sstI (GAGCTC) : 115
sty2 (CCWNG) : 317 362 842 1145 1873
taqI (TCGA) : 20 25 64 70 308 443 1833
tflI (GATTC) : 22 157 494 877 1078 1308
thaI (GGCC) : 78 1820
tliI (CTCGAG) : 442
tru9I (PTAA) : 974 11241 1246 1277 1434 1465 1584 1604 1781
tsel (GCNGC) : 173 458 818 1357 1694
tsp45I (GTSAC) : 435
tsp59I (AAT) : 28 1009 1061 1163 1222 1243 1372 1445 1516
tsp9I (NNCACTGNN) : 38 389 557 575 1616
vapi (ATTAA) : 1693
xbai (CTCGAG) : 52 1826
xcmI (CCANNNNNNNNNNNGG) : 317 362
xhoI (CTCGAG) : 442
xholI (RGATCY) : 46 57
xmaI (CCGGG) : 488
xmaIII (CGCCCG) : 1816

GseqEdit, DNA44686 [Full], page 15

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT C—PAGE 16

GSeqEdit, DNA44686 [Full], page 16

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT B

(4 pages; page 21-24)

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT B—PAGE 1

Protein Request

SEARCH HELP

NEW PAGE EXIT SEARCH PRODUCTION FILTER

PRODUCTION HISTORY UNQ 753

UNQ 753 Human CTRP3 Poly-His

Order	TransFect	System	Source Name	Protocol	Protocol	EXP	PUR	PUR	PUR	Carry
	DNA							Drop	WIP	Over
1.	Order	DNA84662	E Coli	Human CTRP3 Poly-His	<u>PRO1825</u>		<u>EXP2247</u>	<u>PUR1009</u>	Done	
2.	Order	DNA84665	E Coli	Human CTRP3 Poly-His	<u>PRO1825</u>		<u>EXP2247</u>	<u>PUR4414</u>	Done	
3.	Order	DNA87982	Baculovirus	Human CTRP3 IgG	<u>PRO1855</u>		<u>EXP2255</u>	<u>PUR1039</u>	Drop	1
4.	Order	DNA102368	Mammalian Stable	Human CTRP3 Poly-His	<u>PRO4365</u>		<u>EXP2794</u>			

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT B—PAGE 2

GENENGENES		SITEMAP		Additional F	
GENE VIEWER	GENE FAM MAP GENEHUB	ASSAYVIEWER	ASSESSMENT REPORT DOWNLOAD	SELECT	SEARCH
SEQUENCEVIEWER	PROTEIN RNA DNA LIB FLS OLI	ASSAYVIEWER	PRB DOM EXP FAM LOT ASY	SEARCH	SEARCH
EXP2247					
Gene ID:	UNQ753 PRO 1825 Human CTRP3 Poly-His TFDNA84665 FLDNA44686				
EXP Lab Name:	pE44686-1				
DNA Lab Name:					
Protein Request ID:					
System:	E Coli				
Expect Harvest Date:	Harvest Date				
Control:	Cell Pellet				
Fermentation Run ID:	Cell Banking ID				
Cell Lines:	Cell Chain				
Expression Media:	Days Since Bated				
Growth Factors:	Harvestion Date				
Supplements:	Transfer Date				
Washing:	Transfer Volume				
Gels:	PUR#				
Expressed:	PUR1009 11/16/98				
Comments:	PUR4414 11/16/01				
Status:					
Date Entered:	November 9, 1998	Date Complete:			
Date Canceled:		Canceled Reason:			
Scientist:	Dan Yansura	Sample Status:			
Notebook:	0 -	Storage Location:			
Protein Lots:	LOT2552 PIN1308-1				

ASY | DNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUB | RNA | SRC | UNQ | XPT | YST
Assay Viewer | Sequence Viewer | Gene viewer | GenenGenes | SAGE

GenenGenes Feedback

Appl. No. : 10/036,041
 Filed : December 26, 2001

EXHIBIT B—PAGE 3

GENENGENES		SITEMAP	Additional F
GENEVIEWER	GENE FAM MAP GENELUP	GENEVIEWER	GENEVIEWER
SEQUENCEVIEWER	CHG SEC RIM LUB FST POL	SEQUENCEVIEWER	SEQUENCEVIEWER
ASSAYVIEWER	SPP DOM EXP PUR LOT ASY	ASSAYVIEWER	ASSAYVIEWER
EXP2255		View DNA View Protein Update Records	
UNQ753 PRO 1855 Human CTRP3 IgG <u>TFDNA87982</u> <u>FLDNA44686</u>			
EXP Lab Name		44686.221 JSF	
DNA Lab Name		44686.221JSF Hif	
Protein Request ID			
System		Baculovirus	
Virus Status			
Exptd. Virus Harvest Date			
Exptd. Harvest Date			
Control			
Fermentation Run ID			
Cell Line		High5	
Expression Media			
Growth Factors			
Supplements			
Washing			
Gels			
Expressed		TRUE	
Comments			
Status			
Date Entered		November 9, 1998	
Date Cancelled			
Scheduler		Bethanne Deuel	
Notebook		0 -	
ProteinLots		No LOTs for this EXPression	
ASY DNA DOM EXP FAM ELS LUB LOT MAP OL PRB PRO PUR DNA SRC UNQ XPT YST Assay Viewer Sequence Viewer Gene Viewer GenenGenes SAGE			

GenenGenes Feedback

Appl. No. : 10/036,041
 Filed : December 26, 2001

EXHIBIT B—PAGE 4

GENENGenes		SITEMAP		Additional F	
GENE VIEWER	FAM	MAP	GENEHUB	GO	NCBI
SEQUENCE VIEWER	SRC	RNA	LIB	FLS	POB
ASSAY VIEWER	PRB	COM	EXP	PUR	LOT
PROTEIN VIEWER	YPT	XPT	RSV		
EXP2794					
Gene Info					
EXP Lab Name:	UNQ753 PRO 4365 Human CTRP3 Poly-His <u>TFDNA102368</u> FLDNA44686				
DNA Lab Name:	sst.44686.H8				
Protein Request ID:	sst.44686.H8				
System:	Mammalian Stable				
Exptd. Harvest Date:					
Control:					
Permentation Num ID:					
Cell Line:	CHO				
Expression Media:					
Growth Factors:					
Supplements:					
Warnings:					
Gels:	<u>GEL180</u> <u>GEL181</u>				
Expressed:	FALSE				
Comments:	no band on western				
Status:					
Date Entered:	February 16, 1999				
Date Canceled:					
Entered By:	Lhney Lewis-Steiner				
Notebook:	30966 - 55				
Protein Lots:	No LOTs for this EXPression				
ASY DNA DOM EXP FAM FLS LIB LOT MAP OLI PRB PRO PUR RNA SRC UNQ XPT YST Assay Viewer Sequence Viewer Gene Viewer GenenGenes SAGE					

GenenGenes Feedback

Appl. No. : **10/036,041**
Filed : **December 26, 2001**

EXHIBIT C
(2 pages; pages 26-27)

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT C—PAGE 1

GENEVIEWER		GENE	FAA	MAP	GEMENUS	SELECT	STIMAP	Additional
SEQUENCEVIEWER		DNM	SRC	PRNA	IDE	FLST	COL	
ASSAYVIEWER		ENZ	DGM	EXP	PUR	LOT	CSV	
PUR1009								
Gene ID								
Protein Request ID								
DNA Lab Name	pE44686-1							
PUR Name								
Expect Pur Date								
EXP	EXP2247							
MASS Spec								
UV								
CD								
Endotoxin level	6.24 EU/ml							
ELIS Molar Mass (nm)								
Ex Coeff (mg/ml)								
Protein	Protein							
Reduced SH MW	Approx. 31, 55 kDa							
Predicted MW (kDa)	26723.56							
Target Score								
SDS Buffer	1 mM HCl / 0.15 M NaCl / 4% mannitol							
Components								
Status								
Date Entered	November 16, 1998							
Yield Concentration	4752 nM							
Date Canceled								
Scientist	Corpuz, Racquel							
Delivered To								
Notebook	32647-8-							
Protein ID								
OT2552	PIN1308-1	1009						

[ASY](#) | [DNA](#) | [ROM](#) | [EXP](#) | [FAM](#) | [FLS](#) | [LIB](#) | [LOT](#) | [MAP](#) | [OL](#) | [PRB](#) | [PRO](#) | [PUR](#) | [RNA](#) | [SRC](#) | [UNQ](#) | [XPT](#) | [YSI](#)
[Assay Viewer](#) | [Sequence Viewer](#) | [Gene Viewer](#) | [GeneGenes](#) | [SAGE](#)

GenenGenes Feedback

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT C—PAGE 2

11/21/00 51164-247-004

GENENGENES		HOME		SITEMAP		Additional Resources:	
SEARCH	GENE	GENE	GENE	GENE	GENE	GENE	GENE
GENE	GENE	GENE	GENE	GENE	GENE	GENE	GENE
SEQUENCE	SEQUENCE	SEQUENCE	SEQUENCE	SEQUENCE	SEQUENCE	SEQUENCE	SEQUENCE
ASSAY	ASSAY	ASSAY	ASSAY	ASSAY	ASSAY	ASSAY	ASSAY
PUR1009							
Gene Info UNQ753 PRO_1625 Human CTRP3 Poly-His TFDNAM005 EL DNA44686							
Protein Request ID							
DNA Lab Name pE44686-1				Protein Formalname			
PUR Name:				Control			
Exptd. PUR Date				PUR Date July 13, 1999			
EXP EXP2247				No Sequence report available			
Mass Spec							
Warning							
Endotoxin Level 6.24 EU/ml							
LLS Molar Mass (g/mol)							
Ext.Coeff. (mg/ml) ⁻¹ (cm) ⁻¹							
Prot A ng/ml							
Reduced SDS MW Approx. 31, 55 kDa							
Theoretical MW of ORF#1 26723.56							
Gel Score							
Buffer 1 mM HCl / 0.15 M NaCl / 4% mannitol							
Comments							
Status							
Data Entered November 16, 1998				PUR Done Date			
Yield Concentration 4752 nM				Yield Volume 4.5ml			
Data Canceled				Cancel Reason			
Scientist <u>Conor_Baugh</u>				Status Done			
Delivered To				Origin			
Notebook 32647-8-				Storage Location			
Protein Lots							
LOT2552		PIN1308-1		1009			
ASY DNA DOM EXP FAM FLS LIB LOT MAP OLI PRB PRO PUR RNA SRC UNQ XPT YSI Assay Viewer Sequence Viewer Gene Viewer OpenGenes SAGE							
GenenGenes Feedback							

Appl. No. : **10/036,041**
Filed : **December 26, 2001**

EXHIBIT D

(3 pages; pages 29-31)

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT D—PAGE 1

UNQ753 PRO1825 Human CTRP3 Poly-His DNA84665 PUR1009 EXP2247

PIN1308-1

some comment

August 5, 1999

1

Appl. No. : 10/036,041
 Filed : December 26, 2001

EXHIBIT D—PAGE 2

<u>ASY64</u>	Retired	11/4/99	12/14/99	Proinflammatory/PMN infiltrate
<u>ASY67</u>	Retired	9/2/99	9/28/99	MLR - Inhibitory
<u>ASY68</u>	On Hold	10/18/99	11/8/99	Hu Venous Endothelial Cell Ca Flux Assay
<u>ASY74</u>	Retired	9/28/99	11/8/99	Inhibition of Heart Neonatal Hypertrophy Induced by LIF+ET-1
<u>ASY75</u>	Retired	9/28/99	11/8/99	Enhancement of Heart Neonatal Hypertrophy Induced by LIF+H
<u>ASY100</u>	Running	8/20/99		Endotoxin Level (LAL)
<u>ASY103</u>	Running	9/7/99		Protein Gel Analysis
<u>ASY106</u>	Retired	10/2/99	12/1/99	Glucose and FFA uptake in Differentiated Skeletal Muscle
<u>ASY106</u>	Retired	12/3/99	1/4/00	Glucose and FFA uptake in Differentiated Skeletal Muscle
<u>ASY107</u>	Running	11/16/99	1/4/00	Fetal hemoglobin induction in an erythroblastic cell line
<u>ASY110</u>	Retired	10/22/99	11/10/99	Chondrocytes Re-differentiation Assay
<u>ASY110</u>	Retired	12/1/99	4/5/00	Chondrocytes Re-differentiation Assay
<u>ASY110</u>	Retired	12/15/99	3/27/00	Chondrocytes Re-differentiation Assay
<u>ASY110</u>	Retired	5/2/00	8/18/00	Chondrocytes Re-differentiation Assay
<u>ASY110</u>	Retired	5/16/00	8/18/00	Chondrocytes Re-differentiation Assay
<u>ASY111</u>	Retired	10/22/99	11/10/99	Chondrocyte Proliferation Assay
<u>ASY111</u>	Retired	12/1/89	4/5/00	Chondrocyte Proliferation Assay
<u>ASY111</u>	Retired	12/15/99	3/27/00	Chondrocyte Proliferation Assay
<u>ASY111</u>	Retired	5/2/00	8/18/00	Chondrocyte Proliferation Assay
<u>ASY111</u>	Retired	5/16/00	8/18/00	Chondrocyte Proliferation Assay
<u>ASY118</u>	Retired	1/12/00	2/1/00	Inhibition of A -Peptide Binding to Factor VIIA
<u>ASY119</u>	Retired	1/12/00	2/1/00	Inhibition of A - Peptide Binding to Factor VIIIE
<u>ASY128</u>	Retired	5/5/00	6/20/00	Cytokine Release in Human Whole Blood
<u>ASY129</u>	Retired	5/16/00	8/18/00	Chondrocytes re-differentiation by Fluorescence
<u>ASY130</u>	Retired	6/23/00	8/7/00	Chondrocytes Proliferation by fluorescence
<u>ASY132</u>	Retired	10/13/00	11/30/00	Activation of NF κ b
<u>ASY134</u>	Retired	12/5/00	1/22/01	Activation of NF κ b [Luciferase]
<u>ASY134</u>	Retired	9/12/00	10/19/01	Induction of E-selectin
<u>ASY135</u>	Running	2/23/01	4/9/01	Normal Human Iliac Artery Endothelial cells

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT D—PAGE 3

ASY139	Running	2/23/01	4/9/01	Pooled Human Umbilical vein Endothelial cells
ASY140	Running	2/23/01	4/9/01	Coronary artery Smooth Muscle cells
ASY141	Running	2/23/01	4/9/01	Normal human Dermal Fibroblast Proliferation
ASY142	Running	2/14/01	3/26/01	NF-kappa B Inhibition Assay
ASY143	Running	3/8/01	3/26/01	NF-kappa B Inhibition Assay
ASY146	Running	7/19/01	8/3/01	Human Microvascular Endothelial Cell Proliferation Assay
ASY162	Running	11/16/99	9/5/00	NCI Oncology Screen-1
ASY165	Running	8/1/01	9/19/01	CREB
ASY165	Running	9/19/01	9/24/01	CREB
ASY170	Piloting	11/9/01	11/16/01	NHEK proliferation assay
ASY174	Piloting	3/12/02	4/3/02	Bovine Retinal M Endothelial
ASY174	Piloting	4/4/02		Bovine Retinal M Endothelial
ASY174	Piloting	5/17/02		Bovine Retinal M Endothelial
ASY174	Piloting	11/20/02		Bovine Retinal M Endothelial
ASY175	Running	12/21/01		Neuronal Differentiation using RInat technology
ASY175	Running	5/30/02		Neuronal Differentiation using RInat technology
ASY176	Piloting	5/31/02		Haemoglobin Assay
ASY176	Piloting	7/16/02		Haemoglobin Assay
ASY177	Piloting	4/22/03	8/18/03	fibroblast migration assay
ASY178	Running	1/23/03		Proliferation of Fibroblasts
ASY180	Running	3/11/03	3/25/03	Mouse Keratinocyte Assay
ASY181	Running	3/6/03	3/13/03	Human Mammary Epithelial Cell Assay

Grand Canyon Education

Appl. No. : **10/036,041**
Filed : **December 26, 2001**

EXHIBIT E

(2 pages; pages 33-34)

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT E—PAGE 1

GENE/GENES		SEQUENCE		EXPERIMENT		Additional Resources:	
GENE/VIEWER	BLIND-PAIR	MAP	GENEINFO	SEQUENCE	PCR	BLIND-PAIR	BLIND-PAIR
SEQUENCE/VIEWER	SRC	RNA	LIB	FLS	OLI	SEQUENCE	SEQUENCE
ASSAY/VIEWER	WNA	DDA	EXP	PUR	LOF	ASAY	ASAY
SELECT							
Assay/Viewer							
<p>ASY1 Heart Neonatal Hypertrophy ASY2 Heart Adult Hypertrophy ASY3 Adipocyte Lipolysis ASY4 Adipocyte Lipogenesis ASY5 Hematopoiesis: stem cell proliferation ASY6 Hippocampal Neuron Survival ASY7 Retinal Neuron Survival (5-6 days cultur ASY8 Endothelial cell proliferation ASY9 Inhibition of VEGF stimulated endothelia ASY10 Eosinophil degranulation (induction of) ASY11 B cell IgE synthesis (inhibition of)</p>				<input type="checkbox"/> All PIN <input type="checkbox"/> All DNA <input type="checkbox"/> PIN ID <input type="checkbox"/> UNQ ID <input type="checkbox"/> UNQ ID 1308 <input type="checkbox"/> Include UNQ Related Lots			
<input type="checkbox"/> All Positives <input type="checkbox"/> Verified Positives <input type="checkbox"/> Pending				To: _____			
ASSAY RESULT LIST							
Assay ID	Assay Name	Assay ID	Assay Name	Assay ID	Assay Name	Assay ID	Assay Name
ASY1/009	Chondrocyte UNQ/522	LOT2552	PIN1308-1	47.50	nm	45.11	UNQ753 Human CTRP3 Poly-His
ASY1/100	Chondrocyte UNQ/522	LOT2552	PIN1308-1	47.50	nm	72.58	UNQ753 Human CTRP3 Poly-His
ASY1/009	Chondrocyte UNQ/522	LOT2552	PIN1308-1	47.50	nm	82.13	UNQ753 Human CTRP3 Poly-His
ASY1 WNA DDA EXP FAM FLS LIB L2I MAE Q21 P2B P2Q PUR RNA SSG UNQ X21 Y31							

Appl. No. : 10/036,041
Filed : December 26, 2001

EXHIBIT E—PAGE 2

GENE/GENES		SITES/LOCUS		Additional Resources:	
<input type="checkbox"/> GENE VIEWER <input type="checkbox"/> PROTEIN ID <input type="checkbox"/> MAP <input type="checkbox"/> GENEINFO		<input type="checkbox"/> DNA <input type="checkbox"/> RNA <input type="checkbox"/> cDNA <input type="checkbox"/> EXP <input type="checkbox"/> I AM		<input type="checkbox"/> ELIS <input type="checkbox"/> LIB <input type="checkbox"/> LOT <input type="checkbox"/> NAP <input type="checkbox"/> OUT	
<input type="checkbox"/> SEQUENCE VIEWER <input type="checkbox"/> ASSAY VIEWER		<input type="checkbox"/> SELECT		<input type="checkbox"/> SAGE	
Assay Viewer: <input type="checkbox"/> All Positive <input type="checkbox"/> Verified Positive <input type="checkbox"/> Pending					
ASSAY LIST ASY1 Heart Neonatal Hypertrophy ASY2 Heart Adult Hypertrophy ASY3 Adipocyte Lipolysis ASY4 Adipocyte Lipogenesis ASY5 Hematopoietic stem cell proliferation ASY6 Hippocampal Neuron Survival ASY7 Retinal Neuron Survival (5-6 days cultur ASY8 Endothelial cell proliferation ASY9 Inhibition of VEGF stimulated endothelia ASY10 Eosinophil degranulation [Induction of] ASY11 B cell IgE synthesis inhibition			<input type="checkbox"/> PIN <input type="checkbox"/> All DNA PIN: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Number: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1308 <input type="checkbox"/> Include UNQ Related Lots		
<input type="checkbox"/> To <input type="checkbox"/>					